



US007920898B2

(12) **United States Patent**
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(10) **Patent No.:** **US 7,920,898 B2**
(45) **Date of Patent:** ***Apr. 5, 2011**

(54) **DATA ENTRY SYSTEMS**

455/554.1, 554.2, 555; 379/100.02, 100.12,
93.12, 93.25; 235/462.46, 472.02, 375, 380

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,810,101 A 5/1974 Avery
3,906,166 A 9/1975 Cooper

(Continued)

FOREIGN PATENT DOCUMENTS

DE 2739157 A1 3/1979

(Continued)

OTHER PUBLICATIONS

"Always in Touch: The EO Personal Computer 440", undated, Bates
Stamped p. HSD0004018.

(Continued)

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(57) **ABSTRACT**

A data entry system includes a hand held data entry unit having a reading sensor for sensing commands and/or data, rewritable storage for storing information relating to selectable items, a controller (a microprocessor or other processing circuitry) and a display screen for displaying a user readable representation of the commands and/or stored information for a selected item, and a telecommunication interface for the telephonic transmission of information relating to a selected item or items from the storage to a remote processing center and for the telephonic information relating to selectable items from the remote processing center to the storage. Preferably a telecommunication interface is provided in the hand held unit for cellular or other wireless telephony systems. The hand held unit can be configured to combine the data entry functions with those of audio telephony.

71 Claims, 11 Drawing Sheets

(21) Appl. No.: **12/348,051**

(22) Filed: **Jan. 2, 2009**

(65) **Prior Publication Data**

US 2009/0111521 A1 Apr. 30, 2009
US 2009/0247225 A2 Oct. 1, 2009

Related U.S. Application Data

(63) Continuation of application No. 11/515,152, filed on Aug. 31, 2006, now Pat. No. 7,505,785, which is a continuation of application No. 10/869,215, filed on Jun. 15, 2004, now Pat. No. 7,139,591, which is a continuation of application No. 09/548,565, filed on Apr. 13, 2000, now abandoned, which is a continuation of application No. 08/619,682, filed as application No. PCT/GB94/02101 on Sep. 27, 1994, now Pat. No. 6,058,304.

(30) **Foreign Application Priority Data**

Oct. 13, 1993 (GB) 9321133.2

(51) **Int. Cl.**
H04M 1/00 (2006.01)

(52) **U.S. Cl.** **455/557**; 455/556.1; 455/556.2

(58) **Field of Classification Search** 455/422.1,
455/412.1, 414.1, 426.1, 426.2, 462, 465,

